

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**Applicants:** Joshi et al

**Examiner:** Hai V. Tran

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**For:**

**WIRELESS INFORMATION TRANSFER AND  
INTERACTIVE TELEVISION SYSTEM**

**APPEAL BRIEF**

**Appeal from Group 2623**  
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This Appeal is from a Final Office Action mailed on January 5, 2007 (hereinafter, referred to as the "Final Action"). This Appeal was commenced by a Notice of Appeal filed on April 5, 2007, together with a Request for Pre-Appeal Brief Review. This Appeal Brief is respectfully submitted in furtherance of the Appeal.

**I. REAL PARTY IN INTEREST**

The real party in interest for the above-identified application is International Business Machines Corporation, the assignee of the entire right, title and interest in and to the subject application by virtue of an assignment of recorded in the U.S. Patent and Trademark Office.

**II. RELATED APPEALS AND INTERFERENCES**

There are no Appeals or Interferences known to Applicant, Applicant's representatives or the Assignee, which would directly affect or be indirectly affected by or have a bearing on the Board's decision in the pending Appeal.

**III. STATUS OF CLAIMS**

Claims 1, 3-31, and 33-44 are pending, stand rejected and are under appeal. Claims 2 and 32 are canceled. Claims 1 and 36 are independent claims. The claims are set forth in the attached Appendix.

**IV. STATUS OF AMENDMENTS**

No claim amendments have been filed or entered subsequent to the Final Action.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

In general, the claimed inventions are directed to apparatus and methods providing wireless access to remote information sources using a high bandwidth wireless medium (e.g., wireless communication over satellite channels) while providing a interactive user interface using conventional devices such as a television display screen to display an interactive GUI. For

illustrative purposes, the claimed subject matter will be described with reference to exemplary embodiments described in Appellants specification (hereinafter, Spec.) and accompanying figures, although nothing herein shall be construed as unduly limiting the scope of the claimed subject matter.

**Claim 1 recites:**

*A wireless information signal transfer and interactive television system comprises:*  
*at least a first communication system, operatively coupled to a television set, comprising a first RF transceiver unit and a first data processing unit for generating at least one information signal and for generating at least one display signal for display on the television set;*  
*a wireless signal transfer network, operatively coupled to the at least a first communication system, for wirelessly transferring signals including the at least one information signal;*  
*at least a second communication system operatively coupled to the wireless transfer network, comprising a second RF transceiver unit and a second data processing unit for receiving and processing the at least one information signal; and*  
*a server, operatively coupled to the at least a second communication system, for receiving and processing the at least one information signal and providing data included in the information signal to a functional network, wherein the server retrieves return data from the functional network and provides the return data to the at least a second communication system, the at least a second communication system generating at least one return information signal and providing the at least one return information signal to the wireless signal transfer network, the wireless signal transfer network wirelessly transferring the at least one return information signal to the at least a first communication system, which generates the at least one display signal for display on the television set, wherein the at least one information signal and the at least one return information signal are independently transmitted from a television signal.*

FIGs. 1, 2 and 3 illustrate an exemplary embodiment of the subject matter of claim 1 (see, page 7 et seq. of Spec.). In particular, FIG. 1 illustrates an exemplary embodiment of a *wireless information signal transfer and interactive television system* (100). The system (100) comprises *at least a first communication system* (104/106A), operatively coupled to *a television set* (102), comprising a *first RF transceiver unit* (106a) and a *first data processing unit* (104) *for generating at least one information signal and for generating at least one display signal for display on the television set* (102) (see p. 8, lines 6-18 of Spec.).

The system (100) includes a wireless signal transfer network (106, 106B), operatively coupled to the first communication system (104/106A), for wirelessly transferring signals including the information signal (see page 8, lines 18 ~ p. 9, line 8 of Spec.). The system (100) includes a second communication system (104/106A) operatively coupled to the wireless transfer network (106/106B), which comprises a second RF transceiver unit (106A) and a second data processing unit (104) for receiving and processing the information signal generated by the first data processing unit (104) (see page 8, lines 18 ~ p. 9, line 8 of Spec.).

A server (110) is operatively coupled to the second communication system (104/106A). The server (110) receives and processes the information signal and provides data included in the information signal to a functional network (e.g., 112, 114, or 118). The server (110) retrieves return data from the functional network (112, 114 or 118) and provides the return data to the second communication system (104/106A). The second communication system generates a return information signal and provides the return information signal to the wireless signal transfer network (106, 106B), which wirelessly transfers the return information signal to the first

communication system (104/106A), which generates a display signal for display on the television set (102) (see page 9, line 9 ~ p. 10, line 6).

In this system (100), the information signal and the return information signal are independently transmitted from a television signal (see page 1, lines 8 ~ page 3, line 1; P 11, lines 6-17; ).

**Claim 36 recites:**

*A wireless information signal transfer and interactive television system comprises:*

*a first communication system, operatively coupled to a television set, comprising a first RF transceiver unit and a first data processing unit for generating at least one information signal and for generating and displaying at least one display signal superimposed on a conventional television signal on the television set;*

*a remote keyboard device, wirelessly coupled to the first data processing unit, for permitting a system user to control display of the at least one display signal on the television set and enter data corresponding to the display of the at least one display signal;*

*a satellite network, operatively coupled to the first RF transceiver unit, for wirelessly transferring signals including the at least one information signal;*

*a second communication system, operatively coupled to the satellite network, comprising a second RF transceiver unit and a second data processing unit for receiving and processing the at least one information signal; and*

*a server, operatively coupled to the second communication system, for processing the at least one information signal and providing data included in the information signal to a network;*

*wherein the server retrieves return data from the network and provides the return data to the second communication system, the second communication*

*system generating at least one return information signal and providing the at least one return information signal to the satellite network, the satellite network wirelessly transferring the at least one return information signal to the first communication system, which generates and displays the at least one display signal superimposed on a conventional television signal on the television set, wherein the at least one information signal and the at least one return information signal are independently transmitted from a television signal .*

FIGs. 1, 2 and 3 illustrate an exemplary embodiment of the subject matter of claim 36 (see, page 7 et seq. of Spec.). In particular, FIG. 1 illustrates an exemplary embodiment of a *wireless information signal transfer and interactive television system* (100). The system (100) comprises a first communication system (104/106A), operatively coupled to a television set (102), comprising a first RF transceiver unit (106A) and a first data processing unit (104) for generating at least one information signal and for generating and displaying at least one display signal superimposed on a conventional television signal on the television set (102) (see p. 8, lines 6-18 of Spec.).

The system (100) includes a remote keyboard device (214A), wirelessly coupled (215) to the first data processing unit (104), for permitting a system user to control display of the at least one display signal (103) on the television set (102) and enter data corresponding to the display of the at least one display signal (see page 12, lines 11 ~ p. 13).

The system (100) includes a satellite network (106), operatively coupled to the first RF transceiver unit (106A), for wirelessly transferring signals including the at least one information signal. a second communication system (104/106A), operatively coupled to the satellite network (106), comprising a second RF transceiver unit (106A) and a second data processing unit (104)

for receiving and processing the at least one information signal. (see page 8, lines 18 ~ p. 9, line 8 of Spec.).

A server (110) is operatively coupled to the second communication system (104/106A). The server (110) receives and processes the information signal and provides data included in the information signal to a network (e.g., 112, 114, or 118). The server (110) retrieves return data from the functional network (112, 114 or 118) and provides the return data to the second communication system (104/106A). The second communication system generates a return information signal and provides the return information signal to the satellite network (106), which wirelessly transfers the return information signal to the first communication system (104/106A), which generates a display signal superimposed on a conventional television signal on the television set, (102) (see page 9, line 9 ~ p. 10, line 6). In the system (100), the information signal and the return information signal are independently transmitted from a television signal (see page 1, lines 8 ~ page 3, line 1; P 11, lines 6-17; ).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A. Claims 1, 3-5, 8-11 and 33 stand rejected as being unpatentable over U.S. Patent No. 5,999,970 to Krisbergh in view of U.S. Patent No. 6,026,086 to Lancelot et al.

B. Claims 6-7 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of U.S. Patent 6,141,356 to Gorman;

C. Claims 12-14 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of U.S. Patent No. 5,561,703 to Arledge;

D. Claims 15-16 stand as being unpatentable over Krisbergh in view of Lancelot and



further in view of U.S. Patent No. 5,991,596 to Cunningham;

E. Claims 17-18 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of U.S. Patent No. 6,320,941 Tyroler;

F. Claims 19-22, 26-28, and 34-35 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of U.S. Patent No. 6,263,501 to Schein;

G. Claims 23-24 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Schein and further in view of U.S. Patent No. 5,812,931 to Yuen;

H. Claim 25 stands rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Schein and further in view of Yuen and further in view of Arledge;

I. Claims 29-31 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Schein and further in view of Cunningham;

J. Claims 36-39 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of U.S. Patent No. 6,285,407 to Yasuki;

K. Claim 40 stands rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Yasuki and further in view of Arledge;

L. Claim 41 stands rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Yasuki and further in view of Cunningham;

M. Claims 42-43 stand rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Yasuki and further in view of Tyroler; and

N. Claim 44 stands rejected as being unpatentable over Krisbergh in view of Lancelot and further in view of Yasuki and further in view of Schein.

## VII. ARGUMENTS

In rejecting claims under 35 U.S.C. 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993). The burden of presenting a prima facie case of obviousness is only satisfied by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988). The test for obviousness is what the combined teachings of the applied prior art references would have suggested to one of ordinary skill in the art. In re Keller, 642 F.2d 413, 435; 208 U.S.P.Q. 871, 881 (CCPA 1981). The suggestion to combine the references should come from the prior art, and the Examiner cannot use hindsight gleaned from the invention itself to pick and choose among related prior art references to arrive at the claimed invention. In re Fine, 837 F.2d at 1075. If the Examiner fails to establish a prima facie case, the rejection is improper and must be overturned. In re Rijckaert, 9 F.3d at 1532 (citing In re Fine, 837 F.2d at 1074).

In the case at bar, Appellants respectfully submit that the obviousness rejections set forth in the FINAL ACTION are based on impermissible hindsight reasoning where the Examiner picks and chooses among a myriad of different prior art references (about 10 different references) to reconstruct the claimed inventions, followed by conclusory assertions to explain why one of ordinary skill in the art would have been motivated to combine the teachings of the cited references in the manner proposed by the Examiner. Every obviousness rejection is based, primarily in part, on the teachings of the primary reference Krisbergh, as modified by the teachings of a secondary reference Lancelot. Appellants respectfully submit, and will show at the

very least, that the Examiner's proposed modifications of Krisbergh with the teachings of Lancelot are *prima facie* improper on various levels and renders the obviousness rejections of claims 1 and 36, for example, legally improper as a matter of law

Before discussing the impropriety of the obviousness rejections and analysis offered by the Examiner, a brief explanation as to the teachings of Krisbergh, and Lancelot will first be provided.

#### **KRISBERGH**

Krisbergh is directed to an information access system (10) and method that provides interactive access to an information source through a television distribution system (11) (see, generally, FIG. 1, Col. 3, line 5 ~ Col. 3, line 65). Krisbergh teaches a method for integrating an access system into existing television distribution systems such that the components of the access system (10) and of the television distribution system (11) in FIG. 1 **are by necessity commingled** (see, Col. 3, line 10-12; Col. 14, lines 18-30). The television distribution system (11) includes a plurality of set top converters (54) that are interfaced to a terminal end (16) of a television distribution network (12). The set top boxes (54) are by design used for the dual purpose of displaying television transmissions (24) and accessing an information source (60) (see, Col. 4, lines 45-56).

In the Krisbergh system, data returning from an information source (60) is inserted into blank intervals of sequential picture fields of a television transmission on a downstream channel of the television distribution network, wherein the set top boxes (54) includes downstream VBI (vertical blanking interval) extractors (92) to extract the return information signal from the transmitted television signal (24) (see Abstract, Col. 7, lines 27-67; Col. 9, lines 1-17). By using

the cable television distribution network infrastructure and transmitting data using VBI insertion and extraction to send downstream data to the terminal (54), Krisbergh system has limited bandwidth, e.g., a baud rate of about 100k for downstream transmission. (see, Col. 8, lines 1-10).

#### **LANCELOT**

Lancelot discloses (in FIG. 1) a system (100) for integrating a circuit switched network (160) and packet-based communications system (150) to provide a unified communications services such as telephony, video conferencing, data networking and provisioning for services such as cable television (CATV) (See, Col. 3, lines 1-15). The system (100) includes a primary station (105) that is connected to a plurality of end user terminals (110) via a hybrid fiber coaxial cable (HFC) network (103) (see, Col. 3, lines 16-29).

As shown in FIG. 2, the primary station (105) includes a bank of transceivers (120), which convert return signals to the end user terminals (110) to RF frequencies that are compatible with Cable TV networks for transmission over the cable network (103) (see, Col. 4, lines 45-49). The primary station (105) includes a combiner (104) to combine an information signal with a television signal that is transmitted over the cable network (103). (see, Col. 4, lines 18-20; Col. 5, lines 34-55).

#### **1.     The Combination of Krisbergh and Lancelot Does Not Disclose or Fairly Suggest the Invention of Claim 1 as a Whole**

With respect to claim 1, Applicants respectfully submit that the combination of Krisbergh and Lancelot does not disclose or fairly suggest various the subject matter of claim 1 as a whole, related to, for example:

a first communication system, operatively coupled to a television set, comprising a first

RF transceiver unit and a first data processing unit for generating at least one information signal . . . a wireless signal transfer network for wirelessly transferring signals including the at least one information signal ... a second communication system operatively coupled to the wireless transfer network, comprising a second RF transceiver unit and a second data processing unit for receiving and processing the at least one information signal and ... generating at least one return information signal and providing the at least one return information signal to the wireless signal transfer network, *wherein the at least one information signal and the at least one return information signal are independently transmitted from a television signal.*

In formulating the rejection of claim 1, the Examiner sets forth a detailed, yet strained, explanation as to how Krisbergh's teachings meet essentially all limitations of claim 1. As noted above, the primary reference Krisbergh is directed to a system and method for providing access to the Internet through a cable television distribution system and network (11) and 12, wherein Krisbergh teaches that the television distribution network (12) includes branched fiber optic and/or coaxial lines (see, Col. 3, lines 13-15). The Examiner notes Krisbergh's teachings that the television distribution networks (11) and (12) may include orbiting satellite networks (col. 3, lines 25-24) and the Examiner relies on this general statement construing the network (12) in FIG. 1 of Krisbergh as being a "wireless signal transfer network" within the contemplation of the claimed invention of claim 1.

However, Krisbergh does not disclose any specifics on how the access system (10) would be configured under a wireless network and the Examiner applies an analysis of the teachings of Krisbergh system in FIG. 1 in the context of a wireless system, despite the fact that the Krisbergh system is completely described in the context of a cable networking distribution system (12). (see, Col. 3, lines 13-16).

On a fundamental level, the Examiner's reliance on Krisbergh is misplaced as Applicants' specification teaches away from the subject matter of Krisbergh. Indeed, as

discussed in the background, the subject matter of the claimed inventions are generally directed to solving existing problems regarding transmission of data over telephone lines or through cable systems which have limited bandwidth and high losses over long distances (see, e.g., page 1~ page 3, line 1). The claimed inventions are directed to provide user access to information without disadvantages associated with cable or telephone wires., e.g., low frequency telephone or cable communications.

In this regard, there is no reasonable basis to construe Krisbergh as teaching, for example, *a wireless signal transfer network in which at least one information signal and the at least one return information signal are independently transmitted from a television signal*. Indeed, as noted above, Krisbergh teaches a method for integrating an access system into existing television distribution systems such that the components of the access system (10) and of the television distribution system (11) in FIG. 1 **are by necessity commingled** (see, Col. 3, line 10-12; Col, 14, lines 18-30). The television distribution system (11) includes a plurality of set-top converters (54) that are interfaced to a terminal end (16) of a television distribution network (12). The set top boxes (54) are by design used for the dual purpose of displaying television transmissions (24) and accessing an information source (60) (see, Col. 4, lines 45-56). By the very design, the Krisbergh access system relies entirely on the television cable distribution network to transmit information and return signals *dependently on* television signal transmission systems.

At the very least, the Examiner acknowledges that Krisbergh does not disclose a return signal is independently transmitted from a TV signal (see, e.g., top of page 9 of the Final Action). Indeed, as noted above, Krisbergh teaches an access system that is integrated within an existing CATV television infrastructure wherein the set top converters (54) are used for

processing/modulating/tuning TV signals, as well as extracting data from the vertical/horizontal blank intervals of the downstream television transmissions.

While acknowledging that Krisbergh does not disclose a return signal is independently transmitted from a TV signal, the Examiner relies on Lancelot in this regard. In particular, Examiner contends on page 9 of the Final Action that:

*Lancelot, in a similar art, discloses the return data is independently transmitted from a TV signal (FIG. 2, Col. 4, lines 25 – COL. 5, line 17). Therefore, it would have been obvious . . . to modify Krisbergh with Lancelot so to provide a unified circuit switched and packet-based communications system architecture with network internetworking functionality and would further increase the amount of data that Krisbergh system can be transmitted downstream on separate/independent channel.*

Appellants respectfully assert that the Examiner's conclusion of obvious falls way short of that which is required to establish proper motivation for combining the teachings of Krisbergh and Lancelot. The Examiner has provided no sound reasoning to justify modifying Krisbergh with the “purported” teachings of Lancelot with regard to *transmitting return information signals independent of TV signals*.

First of all, Lancelot **does in fact** teach that in the context of TV signal transmissions of a cable TV service provider (112) in FIG. 1, a return signal is combined with a TV signal via combiner (104) (see FIG. 2) for transmission over the the HFC communications system (103) to an end terminal (110). However, in FIG. 2 of Lancelot, in the absence of the CATV services (block 112), Lancelot teaches nothing more than transmitting a return signal on a cable network (103) “independent of a TV signal”. Undoubtedly, any general teaching by any reference such as Lancelot regarding transmission of a return signal “independent of a TV signal” on a cable network transmission network is irrelevant to the claim inventions and actually teaches away

from, and provides no motivation for wirelessly transmitting *return information signal* are *independently transmitted from a television signal*, as recited in claim 1.

In other words, similar to Krisbergh, the Examiner's reliance on the teachings of Lancelot is wholly misplaced as Lancelot (as well as Krisbergh) **are directed to enabling data access and communication over cable television networks.** In the general context of the claimed subject matter, Appellants specification teaches against the use of cable networks and telephone lines for network access due to problems associated therewith (e.g., low bandwidth, loss, etc.). Thus, given the Examiner's acknowledgement of the deficiencies of Krisbergh, the Examiner's reliance on Lancelot is fundamentally misplaced as Lancelot is yet another example of using communications over low bandwidth cable networks, which the Applicants have distinguished from the claimed inventions (see, e.g., pages 1 and 2 of Applicants' specification). In short, one of ordinary skill in the art would actually view the teaching of Krisbergh and Lancelot with regard to communication using existing cable TV networks to be essentially irrelevant and actually teach away from the claimed inventions, in view of the Appellants teachings in the Spec.

Another fundamental flaw in the Examiner's conclusion of obviousness is that other than providing conclusory assertions, the Examiner does not explain or justify why one of ordinary skill in the art would be motivated to modify the Krisbergh system with the teaching of Lancelot so that the Krisbergh system would "transmit return information signal independent of the TV signal." The Examiner merely states in conclusory fashion that it would be obvious to modify Krisbergh with Lancelot because it "*would further increase the amount of data that Krisbergh system can be transmitted downstream on separate independent channel.*"



However, it is axiomatic that if a proposed modification would render a prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See, MPEP 2143.01, citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1964). Furthermore, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. See, MPEP 2143.01, citing *In re Ratti*, 270 F.2d 810 (CCPA 1959).

Here, as noted above, Krisbergh specifically **teaches a system for integrating an information access system (10) within an existing cable television distribution system**, where Krisbergh states that the components of the access system and television distribution system are by necessity commingled, and where the return information signals must be transmitted in the blanking intervals of television signal transmissions. Krisbergh discloses a method of transmitting data to a terminal by inserting the data signal in a VBI of the TV video signal for purposes of displaying the data on a display device associated with the terminal, as the basis of the Krisbergh protocol where Krisbergh cites advantages to such downstream data transmission (see, e.g., Col. 8, lines 1-34).

The Examiner fails to explain how the system of Krisbergh could be readily modified such that downstream information signals could be transmitted independent of the television signals or how such proposed modification would maintain the Krisbergh system satisfactory for its intended purpose. In fact, the Examiner's proposed modification of Krisbergh (not including data in the VBI of the TV signal) would fundamentally change the principle and purpose of the Krisbergh system (i.e., to integrate an access system within the framework of an existing cable

television distribution network).

This point was previously raised by the Appellants during prosecution. In the Final Action, the Examiner responded that:

*the combination of Krisbergh and Lancelot would not change the principle and purpose of the Krisbergh System because the change would further increase the amount of data that Krisbergh system can be transmitted downstream on separate/independent channel. (see page 4 of the Final Action)*

Again, this contention is merely conclusory and, in fact, is contradictory on its face. The Examiner states on one hand that combining Krisbergh and Lancelot would not change the principle and purpose of Krisbergh system, while acknowledging on the other hand that the Krisbergh system would essentially be modified to include separate/independent downstream channels to transmit the return signals independently. **Again, the Examiner simply fails to recognize that the purpose of the Krisbergh system “is to take advantage of already existing television distribution systems” (see Col. 14. ; lines 20-223), wherein the addition of new separate/independent downstream channels would change the system architecture and require changes to current protocols.**

For at least the above reasons, Appellants respectfully assert that the Final Office Action fundamentally fails to present a prima facie case of obviousness against claim 1 and that the teachings of Krisbergh and Lancelot are not properly combinable against claim 1.

**2.     The Combination of Krisbergh, Lancelot, and Yasuki Does Not Disclose or Fairly Suggest the Invention of Claim 36 as a Whole**

Applicants respectfully submit that claim 36 is patentable and non-obvious over the

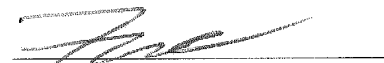
combination of Krisbergh, Lancelot, and Yasuki for reasons similar to that given above for claim 1 in that the combination of the cited references do not teach or fairly suggest *a satellite network in which at least one information signal and at least one return information signal are independently transmitted from a television signal*. Indeed, as noted above, the obviousness analysis set forth on pages 21-26 of the Final Action with regard to claim 36 fails to provide sound legal reasoning and motivation for combining the teachings of Krisbergh and Lancelot with regard the subject matter of, e.g., *a satellite network in which at least one information signal and at least one return information signal are independently transmitted from a television signal* of claim 36. Moreover, Yasuki does not cure the deficiencies of Krisbergh and Lancelot and the Examiner does not rely on Yasuki as such.

Accordingly, claims 1 and 36 (and all pending dependent claims under appeal that depend there from) are patentable over the cited art of record.

### 3. CONCLUSION

Accordingly, for at least the above reasons, it is respectfully requested that the Board reverse all claim rejections under 35 U.S.C. § 103.

Respectfully submitted,



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## APPENDIX A

1. A wireless information signal transfer and interactive television system comprises:  
at least a first communication system, operatively coupled to a television set, comprising a first RF transceiver unit and a first data processing unit for generating at least one information signal and for generating at least one display signal for display on the television set;  
a wireless signal transfer network, operatively coupled to the at least a first communication system, for wirelessly transferring signals including the at least one information signal;  
at least a second communication system operatively coupled to the wireless transfer network, comprising a second RF transceiver unit and a second data processing unit for receiving and processing the at least one information signal; and  
a server, operatively coupled to the at least a second communication system, for receiving and processing the at least one information signal and providing data included in the information signal to a functional network, wherein the server retrieves return data from the functional network and provides the return data to the at least a second communication system, the at least a second communication system generating at least one return information signal and providing the at least one return information signal to the wireless signal transfer network, the wireless signal transfer network wirelessly transferring the at least one return information signal to the at least a first communication system, which generates the at least one display signal for display on the television set, wherein the at least one information signal and the at least one return information signal are independently transmitted from a television signal.

2. (Canceled)

3. The system of Claim 1, further comprising remote data entry and control means, wirelessly coupled to the first data processing unit, for permitting a system user to control display of display signals on the television set and enter data corresponding to the display of the display signals.

4. The system of Claim 3, wherein the remote data entry and control means comprises an alphanumeric keyboard portion.
5. The system of Claim 4, wherein the alphanumeric keyboard portion is in infrared communication with the first data processing unit.
6. The system of Claim 3, wherein the remote data entry and control means comprises a speaker phone portion.
7. The system of Claim 6, wherein the speaker phone portion is in RF communication with the first data processing unit.
8. The system of Claim 1, wherein the wireless signal transfer network is a satellite network.
9. The system of Claim 8, wherein the satellite network includes at least one satellite for transferring signals between the first and second RF transceiver units.
10. The system of Claim 1, wherein the functional network is a wide area information network.
11. The system of Claim 10, wherein the wide area network includes a mail server.
12. The system of Claim 1, wherein the functional network is a paging network.
13. The system of Claim 12, wherein the paging network includes a paging server.
14. The system of Claim 12, wherein the paging network includes a plurality of pagers.

15. The system of Claim 1, wherein the functional network is an emergency response network.

16. The system of Claim 15, wherein the emergency response network includes a server.

17. The system of Claim 1, wherein the first data processing unit comprises indication means for indicating that the at least one return information signal has been received.

18. The system of Claim 17, wherein the indicating means is an LED.

19. The system of Claim 1, wherein the at least one display signal generated by the first data processing unit includes data to generate at least one menu-driven window on the television set.

20. The system of Claim 19, wherein the at least one menu-driven window includes displayable information relating to e-mail messages.

21. The system of Claim 20, wherein the first data processing unit generates a message string to be included as part of the at least one information signal containing information entered by the user in the e-mail window.

22. The system of Claim 21, wherein the functional network is a wide area network having a mail server and further wherein the server coupled to the at least a second communication system provides the message string to the mail server.

23. The system of Claim 19, wherein the at least one menu-driven window includes displayable information relating to paging messages.

24. The system of Claim 23, wherein the at least a first communication system generates a message string to be included as part of the at least one information signal containing information entered by the user in the paging window.

25. The system of Claim 24, wherein the functional network is a paging network having a paging server and further wherein the server coupled to the at least a second communication system provides the message string to the paging server.

26. The system of Claim 19, wherein the at least one menu-driven window includes displayable information relating to financial market transactions.

27. The system of Claim 26, wherein the first data processing unit generates a message string to be included as part of the at least one information signal containing information entered by the user in the financial transaction window.

28. The system of Claim 27, wherein the functional network is a wide area network and further wherein the server coupled to the at least a second communication system provides the message string to the wide area network.

29. The system of Claim 19, wherein the at least one menu-driven window includes displayable information relating to emergency messages.

30. The system of Claim 29, wherein the first data processing unit generates a message string to be included as part of the at least one information signal containing information entered by the user in the emergency message window.

31. The system of Claim 30, wherein the functional network is an emergency response network having an emergency response server and further wherein the server coupled to the at least a second communication system provides the message string to the emergency response server.

32. (Canceled)

33. The system of Claim 1, wherein the first data processing unit comprises:  
processing means;

input controlling means, operatively coupled to the processing means and the remote data entry and control means, for receiving data and control information from the remote data and control means and providing said information to the processing means; and

display signal generating means, operatively coupled to the processing means, for generating the at least one display signal for display on the television set, in response to the at least one return information signal received by the processing means and the data and control information from the remote data and control means.

34. The system of Claim 33, wherein the at least one display signal generated by the display signal generating means is a digital signal and wherein the first data processing unit further comprises digital-to-analog conversion means, operatively coupled to the display signal generating means, for converting the digital display signal to analog form for display on the television set.

35. The system of Claim 34, wherein the first data processing unit further comprises a signal combiner, operatively coupled between the digital-to-analog conversion means and the television set, for combining the analog display signal with at least another analog signal received from the wireless signal transfer network and providing the combined signals to the television set.

36. A wireless information signal transfer and interactive television system comprises:

a first communication system, operatively coupled to a television set, comprising a first RF transceiver unit and a first data processing unit for generating at least one information signal and for generating and displaying at least one display signal superimposed on a conventional



television signal on the television set;

a remote keyboard device, wirelessly coupled to the first data processing unit, for permitting a system user to control display of the at least one display signal on the television set and enter data corresponding to the display of the at least one display signal;

a satellite network, operatively coupled to the first RF transceiver unit, for wirelessly transferring signals including the at least one information signal;

a second communication system, operatively coupled to the satellite network, comprising a second RF transceiver unit and a second data processing unit for receiving and processing the at least one information signal; and

a server, operatively coupled to the second communication system, for processing the at least one information signal and providing data included in the information signal to a network;

wherein the server retrieves return data from the network and provides the return data to the second communication system, the second communication system generating at least one return information signal and providing the at least one return information signal to the satellite network, the satellite network wirelessly transferring the at least one return information signal to the first communication system, which generates and displays the at least one display signal superimposed on a conventional television signal on the television set, wherein the at least one information signal and the at least one return information signal are independently transmitted from a television signal .

37. The system of Claim 36, wherein the satellite network includes at least one satellite for transferring signals between the first and second RF transceiver units.

38. The system of Claim 36, wherein the network coupled to the server is a wide area information network.

39. The system of Claim 38, wherein the wide area information network is the Internet.

40. The system of Claim 36, wherein the network coupled to the server is a paging network.
41. The system of Claim 36, wherein the network is an emergency response network..
42. The system of Claim 36, wherein the first data processing unit comprises indication means for indicating that the at least one return information signal has been received.
43. The system of Claim 42, wherein the indication means is an LED.
44. The system of Claim 36, wherein the at least one display signal generated by the first data processing unit includes data to generate at least one menu-driven window on the television set.

## **Evidence Appendix**

There is no evidence submitted pursuant to 37 CFR §§ 1.130, 1.131 or 1.132 or any other evidence entered by the examiner and relied upon by appellant in this Appeal.

## Related Proceedings Appendix

None.